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| 10/667,955 | 09/22/2003 | James Y.J. Chung | PO7946/MD02-19 | 1214 |
| 157 7590 11/13/2008 BAYER MATERIAL SCIENCE LLC 100 BAYER ROAD PITTSBURGH, PA 15205 | | | | |
| EXAMINER | | | | |
| SZEKELY, PETER A | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/667,955
Filing Date: September 22, 2003
Appellant(s): CHUNG ET AL.

John E. Mrozinski, Jr.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 9/30/08 appealing from the Office action mailed 5/2/08.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

WITHDRAWN REJECTIONS

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner. The anticipation rejection of claims 13-15 and 20-23 is withdrawn by the examiner.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

| | | |
|--------------|---------------|--------|
| 5,178,730 | Bixler et al. | 1-1993 |
| 6,858,665 | Larson | 2-2005 |
| 7,026,023 | Masuda et al. | 4-2006 |
| 6,602,966 | Vargas et al. | 8-2003 |
| 2008/0004391 | Chan et al. | 1-2008 |
| 2008/0021138 | Liang et al. | 1-2008 |
| 7,250,477 | Guo et al. | 7-2007 |

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 13-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ross et al. 6,610,770, in view of Bixler et al. 5,178,730, Larson 6,858,665 or Masuda et al. 7,026,023, with Vargas et al. 6,602,966, Guo et al. 7,250,477, Chan et al. 2008/0004391 and Liang et al. 2008/0021138 submitted as evidence.

Ross et al. disclose a fire retardant polymer composition comprising a polymer and a smectite clay modified with one of more quaternary ammonium compounds and organic material capable of intercalating the clay, with the organic material being present in a concentration of 1-50 wt. % of the clay (claim 1). The clay and the organic material are present in a concentration of 1-40 wt. % of the polymer (claim 2). The organic material can be an organic acid (claim 3) or polycarbonate (claim 4). The clay can be montmorillonite or hectorite (column 6, lines 50-67, claim 8). Dimethyl bis (hydrogenated tallow) ammonium chloride is described in column 8, lines 35-60. The organic acid can be citric acid (column 9, line 16). The polymer can be polycarbonate

(column 5, line 28). The clays used in the composites of Ross et al. are organoclays (from column 10, line 43, to column 11, line 16). Ross et al. do not specify the particle size of the clay; however "organoclay" is a synonym for "nanoclay". (See Vargas et al., column 2, lines 65-67, Liang et al., paragraphs 0004, 0035, 0036 and 0040, Chan et al., paragraph 0073 and Guo et al., column 15, lines 43-44.) Furthermore, Bixler et al. in claim 2, teach the dimensions of hectorite, Larson et al. reveal the dimensions of montmorillonite in column 5, lines 12-18 and Masuda et al. display dimensions of fine montmorillonite particles in Examples 1-4. Accordingly, it would have been obvious to one having ordinary skill in the art, at the time the invention was made, to select polycarbonate and citric acid from a list of equivalents and to use the hectorite or montmorillonite having the particle sizes shown by the secondary references, since they are typical of organoclay. The process is nominal comprising only the mixing of the ingredients. The impact performance is inherent in the composition.

(10) Response to Argument

Claim 1 of Ross et al. requires the presence of the organic material and claim 3 requires the presence of an acid. The acid can be either carboxylic or sulfuric acid. There is no mention of optional ingredients in the claims. The clays of Ross et al. are organoclays. Organoclays and nanoclays are synonyms. The tertiary references (for evidence) prove that point and they were cited already in the Final Rejection. Teppo discloses clays, not organoclays. The secondary references show the typical particle sizes of the organoclays used by Ross et al. As far as the Declaration of Dr. Chung is concerned the breadth of the results is not commensurate with the claims. The claims

show 1-20%, 5-15% and 8-12% carboxylic acid or 1-20% citric acid relative to the clay. The Declaration shows only the effect of 10% citric acid. The evidence of unexpected results has to establish said unexpected results for the entire claimed range, not only at one point of said range. See *in re Harris*, 74 USPQ2d 1951, 1955 (Fed. Cir. 2005); *In re Costello*, 178 USPQ 290, 292 (CCPA 1973).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Peter Szekely/

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/Harold Y Pyon/

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